

A NEW SPECIES OF ECHTHROPLEXIS, AN ENCYRTID HYPERPARASITE OF LERP-FORMING PSYLLIDS ON EUCALYPTS (HYMENOPTERA, CHALCIDOIDEA).

By E. F. RIEK, Division of Entomology, C.S.I.R.O., Canberra, A.C.T.

(Seven Text-figures.)

[Read 25th July, 1962.]

*Synopsis.*

A new encyrtid hyperparasite of lerp-forming psyllids (*Echthroxiplexis psyllae*) is described.

This species has been bred as a common hyperparasite of several lerp-forming psyllids. The primary parasites of the psyllids, in these cases, are species of the similar looking encyrtid genus *Psyllaephagus*. The species is described to facilitate ecological studies on the lerp-forming psyllids of eucalypts.

ECHTHROPLEXIS PSYLLAE, sp. nov.

*Female.*

Body metallic black with slight purple hues; antenna all dark; legs all dark, except joints and middle and hind tarsi; tegula dark; mandibles rather dark; wings clear.

Length, excluding ovipositor, 1.3 to 1.5 mm., ovipositor about 0.4 mm.; vertex of head wide, about as wide as eye width, mesal margins of eyes converging to median ocellus, vertex very finely rugoso-punctate with a few scattered larger punctures at the bases of the short hairs; ocelli very small, lateral ocelli almost touching eye, ocelli in an almost equilateral triangle, the lateral ocelli very slightly further apart than either is from median ocellus, median ocellus much closer to eye than to lateral ocellus; scrobes clearly defined, rather deep and narrow, converging and meeting above in a rounded point, their upper limit slightly overhung by the face, scrobes very far from eye margin; areas between scrobes slightly raised, more apparently so because of the deep scrobes; lower face with only scattered, short hairs; face rather elongated, malar space as long as eye length; antennal insertions well separated but considerably closer together than either is from eye margin, almost twice as wide apart as each is from lower border of clypeus; scape long and thin, slightly expanded below, pedicel large, considerably longer than wide, flagellum relatively short, expanding distally; first funicle very small, slightly longer than wide, second distinctly larger, somewhat longer than wide, sixth funicle slightly longer than wide; club large, about as long as the distal three funicle segments, the first two club segments large, subequal, the terminal segment rather pointed; scutellum with evenly spaced hairs continued across meson, the apical pair considerably enlarged, erect, the subapical pair enlarged and partly erect; gaster much shorter than the thorax; ovipositor valves strongly exerted, about as long as gaster, very slender; apical tergite of gaster not produced over the ovipositor valves; middle tarsus thickened, basitarsus long, about as long as the apical four segments combined, basitarsal pad with tubercles in two more or less irregular longitudinal rows over most of the ventral surface; marginal vein distinctly longer than wide but shorter than postmarginal vein, postmarginal subequal to stigmal, stigmal with a distinct spur.

*Male.*

Body metallic black with slight purple hues; antenna all dark; legs all dark except joints and middle tarsus, less so hind tarsus; tegula dark; mandibles rather dark; wings clear.

A NEW SPECIES OF ECHTHROPLEXIS, AN ENCYRTID HYPERPARASITE OF LERP-FORMING PSYLLIDS ON EUCALYPTS (HYMENOPTERA, CHALCIDOIDEA).

By E. F. RIEK, Division of Entomology, C.S.I.R.O., Canberra, A.C.T.

(Seven Text-figures.)

[Read 25th July, 1962.]

*Synopsis.*

A new encyrtid hyperparasite of lerp-forming psyllids (*Echthroxiplexis psyllae*) is described.

This species has been bred as a common hyperparasite of several lerp-forming psyllids. The primary parasites of the psyllids, in these cases, are species of the similar looking encyrtid genus *Psyllaephagus*. The species is described to facilitate ecological studies on the lerp-forming psyllids of eucalypts.

ECHTHROPLEXIS PSYLLAE, sp. nov.

*Female.*

Body metallic black with slight purple hues; antenna all dark; legs all dark, except joints and middle and hind tarsi; tegula dark; mandibles rather dark; wings clear.

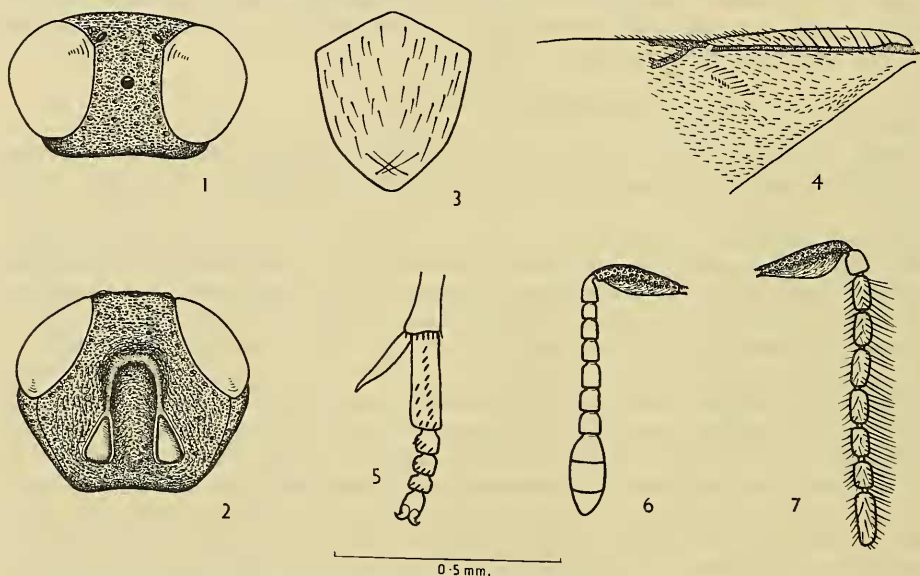
Length, excluding ovipositor, 1.3 to 1.5 mm., ovipositor about 0.4 mm.; vertex of head wide, about as wide as eye width, mesal margins of eyes converging to median ocellus, vertex very finely rugoso-punctate with a few scattered larger punctures at the bases of the short hairs; ocelli very small, lateral ocelli almost touching eye, ocelli in an almost equilateral triangle, the lateral ocelli very slightly further apart than either is from median ocellus, median ocellus much closer to eye than to lateral ocellus; scrobes clearly defined, rather deep and narrow, converging and meeting above in a rounded point, their upper limit slightly overhung by the face, scrobes very far from eye margin; areas between scrobes slightly raised, more apparently so because of the deep scrobes; lower face with only scattered, short hairs; face rather elongated, malar space as long as eye length; antennal insertions well separated but considerably closer together than either is from eye margin, almost twice as wide apart as each is from lower border of clypeus; scape long and thin, slightly expanded below, pedicel large, considerably longer than wide, flagellum relatively short, expanding distally; first funicle very small, slightly longer than wide, second distinctly larger, somewhat longer than wide, sixth funicle slightly longer than wide; club large, about as long as the distal three funicle segments, the first two club segments large, subequal, the terminal segment rather pointed; scutellum with evenly spaced hairs continued across meson, the apical pair considerably enlarged, erect, the subapical pair enlarged and partly erect; gaster much shorter than the thorax; ovipositor valves strongly exerted, about as long as gaster, very slender; apical tergite of gaster not produced over the ovipositor valves; middle tarsus thickened, basitarsus long, about as long as the apical four segments combined, basitarsal pad with tubercles in two more or less irregular longitudinal rows over most of the ventral surface; marginal vein distinctly longer than wide but shorter than postmarginal vein, postmarginal subequal to stigmal, stigmal with a distinct spur.

*Male.*

Body metallic black with slight purple hues; antenna all dark; legs all dark except joints and middle tarsus, less so hind tarsus; tegula dark; mandibles rather dark; wings clear.

Length 1.2 to 1.5 mm.; vertex of head wide, at least as wide as eye width, finely rugoso-punctate, lateral ocelli almost touching eye, slightly wider apart than either is from median ocellus, median ocellus somewhat closer to the eye than to lateral ocellus, about twice its diameter from eye; scrobes deep, clearly defined, converging and meeting above; lower face very similar to that of female; scape somewhat expanded below, widest about the middle, pedicel slightly longer than wide, flagellum clothed in whorls of long hairs, hairs distinctly longer than width of segments, basal four funicle segments subequal, about twice as long as wide, very slightly produced on one side, fifth and sixth funicle segments decreasing, sixth somewhat longer than wide, club large, more than three times as long as wide, as long as the apical two funicle segments combined, tapering to a rather truncately rounded apex; postmarginal vein very slightly shorter than stigmal.

*Types*.—Holotype ♀, allotype ♂ and paratypes in the Australian National Insect Collection, C.S.I.R.O., Division of Entomology Museum, Canberra. Paratypes in the British Museum (Nat. Hist.) and the U.S. National Museum.



Figures 1-7. *Echthroxiplexis psyllae*.—1, Head, dorsal view; 2, Head, frontal view; 3, Scutellum; 4, Basal half of forewing; 5, Middle tarsus, ventral; 6, Female antenna; 7, Male antenna.

*Type Locality*.—Canberra, Australia (1 Mar. 1954, L. R. Clark), bred from *Spondyliaspis vittiformis* on *Eucalyptus polyanthemos*. Paratypes also from *Spondyliaspis albicollaris* on *Eucalyptus polyanthemos*; *Spondyliaspis albitextura* and *Creitis* sp. *corniculata* group on *Eucalyptus blakelyi*; *Spondyliaspis nigra* and *Spondyliaspis* sp. *bancrofti* group on *Eucalyptus melliodora*.

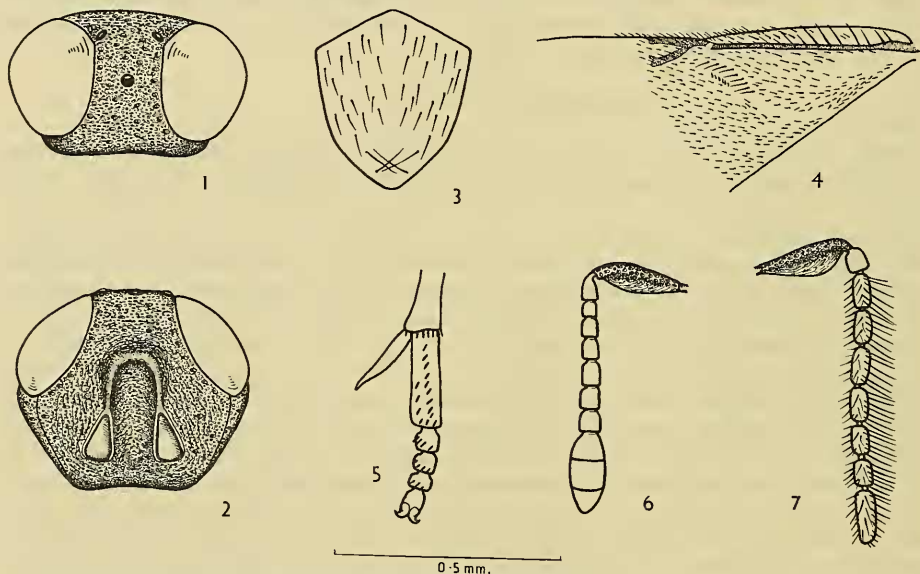
The species is recorded also from Araluen, New South Wales (29 Apr. 1956, L. R. Clark), bred from *Cardiaspina fiscella* on *Eucalyptus tereticornis*; Taemas Bridge, New South Wales (4 Apr. 1957, L. R. Clark), bred from *Cardiaspina retator* on *Eucalyptus blakelyi*; Benalla-Shepparton, Victoria (15 Apr. 1957, L. R. Clark), bred from *Cardiaspina retator* on *Eucalyptus ?camaldulensis*; Benalla-Seymour, Victoria (16 Apr. 1957, L. R. Clark), bred from *Cardiaspina retator* on *Eucalyptus blakelyi*; Heywood Park, South Australia (7 June 1959, R. V. Southcott), bred from *Spondyliaspis albitextura* on *Eucalyptus camaldulensis*.

This species can be distinguished at once from species of *Psyllaephagus* by the venation of the forewing, the structure of the middle tarsus or the hairs on the scutellum.



Length 1.2 to 1.5 mm.; vertex of head wide, at least as wide as eye width, finely rugoso-punctate, lateral ocelli almost touching eye, slightly wider apart than either is from median ocellus, median ocellus somewhat closer to the eye than to lateral ocellus, about twice its diameter from eye; scrobes deep, clearly defined, converging and meeting above; lower face very similar to that of female; scape somewhat expanded below, widest about the middle, pedicel slightly longer than wide, flagellum clothed in whorls of long hairs, hairs distinctly longer than width of segments, basal four funicle segments subequal, about twice as long as wide, very slightly produced on one side, fifth and sixth funicle segments decreasing, sixth somewhat longer than wide, club large, more than three times as long as wide, as long as the apical two funicle segments combined, tapering to a rather truncately rounded apex; postmarginal vein very slightly shorter than stigmal.

*Types*.—Holotype ♀, allotype ♂ and paratypes in the Australian National Insect Collection, C.S.I.R.O., Division of Entomology Museum, Canberra. Paratypes in the British Museum (Nat. Hist.) and the U.S. National Museum.



Figures 1-7. *Echthroxiplexis psyllae*.—1, Head, dorsal view; 2, Head, frontal view; 3, Scutellum; 4, Basal half of forewing; 5, Middle tarsus, ventral; 6, Female antenna; 7, Male antenna.

*Type Locality*.—Canberra, Australia (1 Mar. 1954, L. R. Clark), bred from *Spondyliaspis vittiformis* on *Eucalyptus polyanthemus*. Paratypes also from *Spondyliaspis albicollaris* on *Eucalyptus polyanthemus*; *Spondyliaspis albitextura* and *Creitis* sp. *corniculata* group on *Eucalyptus blakelyi*; *Spondyliaspis nigra* and *Spondyliaspis* sp. *bancrofti* group on *Eucalyptus melliodora*.

The species is recorded also from Araluen, New South Wales (29 Apr. 1956, L. R. Clark), bred from *Cardiaspina fiscella* on *Eucalyptus tereticornis*; Taemas Bridge, New South Wales (4 Apr. 1957, L. R. Clark), bred from *Cardiaspina retator* on *Eucalyptus blakelyi*; Benalla-Shepparton, Victoria (15 Apr. 1957, L. R. Clark), bred from *Cardiaspina retator* on *Eucalyptus ?camaldulensis*; Benalla-Seymour, Victoria (16 Apr. 1957, L. R. Clark), bred from *Cardiaspina retator* on *Eucalyptus blakelyi*; Heywood Park, South Australia (7 June 1959, R. V. Southcott), bred from *Spondyliaspis albitextura* on *Eucalyptus camaldulensis*.

This species can be distinguished at once from species of *Psyllaephagus* by the venation of the forewing, the structure of the middle tarsus or the hairs on the scutellum.